



STEREOTACTIC MAMMOGRAPHY EQUIPMENT & MEDICAL PHYSICIST EVALUATION

The following is a list of tests for the mammography physicist consultation and evaluation. An X in the appropriate column indicates the stereotactic machine should be tested for the indicated requirement.

Test					Screen-Film	Digital
Stereotactic breast biopsy unit assembly evaluation.					X	X
Collimation assessment.					X	X
Focal spot size and/or limiting spatial resolution					X	X
kVp accuracy and reproducibility.					X	X
Beam quality assessment at clinical kVp and at 30 kVp					X	X
AEC Reproducibility. Do test only if used.					X	X
AEC density control. Do test only if used.					X	
AEC compensation (tracking). Do test only if used.					X	X
Screen speed uniformity.					X	
Digital receptor uniformity						X
Breast entrance exposure and average glandular dose. (Use the facility=s standard technique for 4.2 cm compressed breast.)					X	X
Image quality evaluation. The phantom image should be compared to the facility=s monthly image for comparison of background O.D. (if applicable) and mAs readout. If the digital mode is used the image should be stored. Acceptable scores for fibers, specks, and masses are shown in the table.	Mammography Accreditation Phantom		Mini-phantom		X	X
	screen-film	digital	screen-film	digital		
	Fibers	4.0	5.0	2.0		
	Specks	3.0	4.0	2.0		
	Masses	3.0	3.5	2.0		
Artifact evaluation.					X	X
Localization accuracy test.					X	X
Verify high-frequency, constant-potential, 3-phase or equivalent.					X	X
Output @ 28 kVp > 500 mR/s.					X	X
Manual exposure reproducibility.					X	X
mAs linearity.					X	X
Appropriate target and filter material.					X	X
Focal spot to image receptor distance > 50 cm.					X	X
Useful beam parallel to chest wall and perpendicular to the image receptor.					X	X
Machine must have a compression device.					X	X
Shielding Evaluation.					X	X
Evaluation of the darkroom.					X	
Film processing quality control record review.					X	